

CLAIMS PENDING, AS AMENDED HEREIN

25. A monoclonal antibody specific for human Mcm3.

26. A monoclonal antibody detecting and binding monospecifically human Mcm3 both immunohistologically and immunobiochemically, whereby the monoclonal antibody has the same properties as the monoclonal antibody of the hybridoma cell line with the deposit number DSM ACC2388.

27. A monoclonal antibody detecting and binding monospecifically human Mcm3 both immunohistologically and immunobiochemically, whereby the epitope of the monoclonal antibody of the hybridoma cell line with the deposit number DSM ACC2388 is detected.

28. The monoclonal antibody according to Claim 25 altered biochemically, by molecular biology or synthetically.

29. The monoclonal antibody according to Claim 25, which is produced by the hybridoma cell line with the deposit number DSM ACC2388.

30. A hybridoma cell line which expresses a monoclonal antibody specific for human Mcm3.

31. A hybridoma cell line according to Claim 30, whereby the hybridoma cell line is the cell line with the deposit number DSM ACC2388.

32. A method of detecting human Mcm3 using the monoclonal antibody of Claim 25.

33. A method for the immunohistological, immunocytological or immunobiochemical detection of human Mcm3 in a sample using the monoclonal antibody of Claim 25.

34. A method of Claim 33 wherein the sample is selected from serum, sputum, urine, or liquor.

35. A method of Claim 33 wherein the sample is tissue or a fine needle aspiration product.

36. A method of Claim 33 wherein the method is an immunobiochemical method selected from ELISA, RIA, Western Blot, Far Western Blot, immunoprecipitation and affinity chromatographic steps.

37. A method of Claim 33 wherein the method is an immunocytological method selected from FACS and MACS.

38. A method of Claim 33 wherein the method is an immunohistological method selected from fluorescence, radioactive, enzymatic and chemiluminescence methods.

39. A process for the production of the antibody according to Claim 25, characterized in that an animal is immunized with human Mcm3, and monoclonal antibodies are obtained after fusion of spleen cells of the animal with myeloma cells which comprises the steps:

- (i) initial screening of the hybridoma by means of an immunobiochemical method;
- (ii) screening of the hybridoma that were positive in step (i) by means of an immunohistochemical method.

40. A process for the production of purified human Mcm3 employing the monoclonal antibody according to Claim 25.

41. A process for the production of purified human Mcm3, characterized in that the process comprises an affinity chromatography step with a monoclonal antibody according to Claim 25.

42. A process for the production of purified human Mcm3 comprising an immunoprecipitation step with a monoclonal antibody according to Claim 25.

43. A diagnostic composition comprising a monoclonal antibody according to Claim 25.

44. A method for the production of a preparation for the therapy of tumors, allergies, autoimmunopathies, scar formation, inflammation and rheumatic diseases as well as the suppression of defense reactions of transplantations employing the monoclonal antibody of Claim 25.

45. A pharmaceutical composition comprising a monoclonal antibody of Claim 25 together with a pharmaceutical acceptable adjuvant.

46. A diagnostic kit comprising the monoclonal antibody according to Claim 25.

47. A diagnostic kit according to Claim 46 for the combined detection of the expression of Mcm3, Ki-67 and p27 for tumor diagnosis.

48. A method of preventing or treating a disease caused by or contributed by the activity or level of Mcm3 expression, comprising administering to the subject an effective amount of a pharmaceutical composition comprising an antibody according to Claim 25 together with a pharmaceutically acceptable carrier.

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